

PROGRAM SOLICITATION

Number 97.2

**Small Business
Innovation
Research Program**

IMPORTANT

The DoD updates its SBIR mailing list annually. To remain on the mailing list or to be added to the list, send in the Mailing List form (Reference E) found at the back of this solicitation or complete the electronic form at <http://www.teltech.com/sbir/form.html>. Failure to send the form annually will result in removal of your name from the mailing list.

If you have general questions about the Defense Department's SBIR program, please call the SBIR/STTR Help Desk at (800) 382-4634, or see the DoD SBIR/STTR Home Page, at <http://www.acq.osd.mil/sadbu/sbir>.

U.S. Department of Defense
SBIR Program Office
Washington, DC 20301

Opening Date: Thurs., May 1, 1997
Closing Date: Wed., July 16, 1997

Deadline for receipt of proposals at
the DoD Component is 2:00 p.m.
local time.

IMPORTANT NEW FEATURES OF THE DEFENSE DEPARTMENT'S SBIR PROGRAM

This solicitation reflects a number of important changes in the Defense Department's SBIR program that have been implemented over the past two years. The purpose of these changes is (1) to make the program more user-friendly to small firms and (2) to increase commercialization of SBIR research in military and/or private sector markets. The main changes are as follows:

1. **The Department's SBIR/STTR Help Desk** can address your questions about this solicitation, the proposal preparation process, contract negotiation, payment vouchers, government accounting requirements, intellectual property protection, the Fast Track, obtaining outside financing, and other program-related areas. You may contact the Help Desk by:

Phone: 800-382-4634 (8AM to 8PM EST)
Fax: 800-462-4128
Email: SBIRHELP@us.teltech.com
2. **The SBIR/STTR Home Page (<http://www.acq.osd.mil/sadbu/sbir>)** offers electronic access to answers to commonly-asked questions, sample SBIR proposals, model SBIR contracts, abstracts of ongoing SBIR projects, early releases of the SBIR solicitation, the latest updates on the SBIR program, information on the Small Business Technology Transfer (STTR) program, hyperlinks to sources of business assistance and financing, and other useful information.
3. **The Department now gives its highest priority for Phase II award to SBIR projects that qualify for the "Fast Track" by attracting independent third-party investors.** These Fast Track projects also receive interim funding between Phases I and II as well as expedited processing. See Section 4.5 of this solicitation for complete information on how to participate in the Fast Track. Thus far, almost all projects qualifying for the Fast Track have received interim funding and a very high percentage have been selected for Phase II award. Approximately 10 percent of the Phase II awards resulting from the 1996 SBIR solicitations will be Fast Track projects.
4. **You may contact the DoD authors of solicitation topics to ask questions about the topics** before you submit a proposal. Procedures for doing so are discussed in Section 1.5(c) of this solicitation. Please note that, to ensure competitive fairness, you may talk by telephone with a topic author to ask such questions only during the six weeks preceding the date on which the solicitation officially opens. At other times, you may submit written questions, and all such questions and the responses will be posted electronically on the Internet for general viewing.
5. **All companies submitting a Phase I or Phase II proposal must complete a Company Commercialization Report (Appendix E)** -- a simplified listing of the commercialization status of the company's prior Phase II efforts (see Section 3.4(n)).
6. **An SBIR proposal that meets the goals of a solicitation topic but does not use the exact approach specified in the topic will still be considered.** For further information on this new Department policy, see Section 4.1 of this solicitation.

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DoD PROGRAM SOLICITATION FOR SMALL BUSINESS INNOVATION RESEARCH

1.0 PROGRAM DESCRIPTION

1.1 Introduction

The Army, Navy, Defense Advanced Research Projects Agency (DARPA), Special Operations Command (SOCOM), and Office of the Secretary of Defense (OSD), hereafter referred to as DoD Components, invite small business firms to submit proposals under this solicitation for the Small Business Innovation Research (SBIR) program. Firms with the capability to conduct research and development (R&D) in any of the defense-related topic areas described in Section 8.0, and to commercialize the results of that R&D, are encouraged to participate.

Objectives of the DoD SBIR Program include stimulating technological innovation, strengthening the role of small business in meeting DoD research and development needs, fostering and encouraging participation by minority and disadvantaged persons in technological innovation, and increasing the commercial application of DoD-supported research or research and development results.

The Federal SBIR Program is mandated by Public Laws PL 97-219, PL 99-443, and PL 102-564. The basic design of the DoD SBIR Program is in accordance with the Small Business Administration (SBA) SBIR Policy Directive, January 1993. The DoD Program presented in this solicitation strives to encourage scientific and technical innovation in areas specifically identified by DoD Components. The guidelines presented in this solicitation incorporate and exploit the flexibility of the SBA Policy Directive to encourage proposals based on scientific and technical approaches most likely to yield results important to DoD and the private sector.

1.2 Three Phase Program

This program solicitation is issued pursuant to the Small Business Innovation Development Act of 1982, PL 97-219, PL 99-443, and PL 102-564. Phase I is to determine, insofar as possible, the scientific, technical, and commercial merit and feasibility of ideas submitted under the SBIR Program. Phase I awards are typically up to \$100,000 in size over a period not to exceed six months. Proposals should concentrate on that research or research and development which will significantly contribute to

Each proposer must qualify as a small business for research or research and development purposes as defined in Section 2.0 and certify to this on the Cover Sheet (Appendix A) of the proposal. In addition, a minimum of two-thirds of the research and/or analytical work in Phase I must be carried out by the proposing firm. For Phase II, a minimum of one-half of the research and/or analytical

proving the scientific, technical, and commercial feasibility of the proposed effort, the successful completion of which is a prerequisite for further DoD support in Phase II. The measure of Phase I success includes evaluations of the extent to which Phase II results would have the potential to yield a product or process of continuing importance to DoD and the private sector. Proposers are encouraged to consider whether the research and development they are proposing to DoD Components also has private sector potential, either for the proposed application or as a base for other applications.

Subsequent Phase II awards will be made to firms on the basis of results of their Phase I effort and the scientific, technical, and commercial merit of the Phase II proposal. Phase II awards are typically up to \$750,000 in size over a period generally not to exceed 24 months (subject to negotiation). Phase II is the principal research or research and development effort and is expected to produce a well-defined deliverable prototype. A more comprehensive proposal will be required for Phase II.

Under Phase III, the small business is expected to obtain funding from the private sector and/or non-SBIR Government sources to develop the prototype into a viable product or non-R&D service for sale in military and/or private sector markets.

This solicitation is for Phase I proposals only. Only proposals submitted in response to this solicitation will be considered for Phase I award. Proposers who were not awarded a contract in response to a prior SBIR solicitation are free to update or modify and re-submit the same or modified proposal if it is responsive to any of the topics listed in Section 8.0.

For Phase II, no separate solicitation will be issued and no unsolicited proposals will be accepted. Only those firms that were awarded Phase I contracts will be considered (Section 4.3 and 5.2).

DoD is not obligated to make any awards under either Phase I, II, or III, and all awards are subject to the availability of funds. DoD is not responsible for any monies expended by the proposer before award of any contract.

1.3 Proposer Eligibility and Limitations

work must be performed by the proposing firm. The percent of work is usually measured by dollars of labor effort, although proposers planning to subcontract a significant fraction of their work should verify how it will be measured with their DoD contracting officer during contract negotiations. For both Phase I and II, the primary employment of the principal investigator must be with the

small business firm at the time of the award and during the conduct of the proposed effort. Primary employment means that more than one-half of the principal investigator's time is spent with the small business. Primary employment with a small business concern precludes full-time employment at another organization. Deviations from the requirements in this paragraph must be approved in writing by the contracting officer (during contract negotiations).

For both Phase I and Phase II, all research or research and development work must be performed by the small business concern in the United States. "United States" means the fifty states, the Territories and possessions of the United States, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the District of Columbia. Work subcontracted by the small business to others may be performed outside the United States if, in the view of DoD evaluators of the company's proposal, such work will result in the transfer of foreign technology, knowledge, or resources to the United States, or otherwise serve the SBIR program's goal of commercialization of new technology in U.S. military and/or private sector markets.

Joint ventures and limited partnerships are permitted, provided that the entity created qualifies as a small business in accordance with the Small Business Act, 15 USC 631, and the definition included in Section 2.2.

1.4 Conflicts of Interest

Awards made to firms owned by or employing current or previous Federal Government employees could create conflicts of interest for those employees in violation of 18 USC and 10 USC 2397. Such proposers should contact the cognizant Ethics Counselor from the employees' Government agency for further guidance.

1.5 Questions about the SBIR Process and Solicitation Topics

a. General Questions/Information. The DoD SBIR/STTR Help Desk is prepared to address general questions about this solicitation, the proposal preparation process, contract negotiation, payment vouchers, Government accounting requirements, intellectual property protection, the Fast Track, financing strategies, and other program-related areas.

The Help Desk may be contacted by:

Phone: 800-382-4634 (8AM to 8PM EST)

The SITIS service for this solicitation opens on or around March 20, 1997 and closes to new questions on June 16, 1997. SITIS will post all questions and answers on the Internet (see shortcut bar at the top of the DoD SBIR Home Page), from March 20, 1997 through July 16, 1997. (Answers will also be emailed or faxed directly to the inquirer if the inquirer provides an email address or fax number.) Answers are generally posted within seven working days of question submission.

Fax: 800-462-4128

Email: SBIRHELP@us.teltech.com

The DoD SBIR/STTR Home Page offers electronic access to answers to commonly asked questions, sample SBIR proposals, model SBIR contracts, abstracts of ongoing SBIR projects, early releases of the SBIR solicitation, the latest updates on the SBIR program, hyperlinks to sources of business assistance and financing, and other useful information.

DOD SBIR/STTR

HOME PAGE: <http://www.acq.osd.mil/sadbu/sbir>

b. General Questions About a DoD Component.

General questions pertaining to a particular DoD Component (Army, Navy, Air Force, etc) should be submitted in accordance with the instructions given at the beginning of that Component's topics, in Section 8.0 of this solicitation.

c. Technical questions about solicitation topics.

Approximately six weeks before this solicitation officially opens on May 1, 1997, the solicitation topics are released electronically on the DoD SBIR/STTR Home Page (<http://www.acq.osd.mil/sadbu/sbir>), along with the names of the topic authors and their phone numbers. This early release gives proposers an opportunity to ask technical questions about specific solicitation topics by telephone before the solicitation opens.

Once a solicitation opens, telephone questions will no longer be accepted, but proposers may ask written questions through the SBIR Interactive Topic Information System (SITIS), in which the questioner and respondent remain anonymous and all questions and answers are posted electronically for general viewing. Proposers may submit written questions to SITIS via the DoD SBIR/STTR Home Page -- see the shortcut menu at the top of the Page. Alternatively, proposers may submit written questions to SITIS via e-mail, fax, paper mail, or telephone as follows:

Defense Technical Information Center

MATRIS Office, DTIC-AM

ATTN: SBIR Coordinator

53355 Cole Road

San Diego, CA 92152-7213

Phone: (619) 553-7006

Fax: (619) 553-7053

Email: sbir@dticam.dtic.mil

1.6 Requests for Copies of DoD SBIR Solicitation

To remain on the DoD Mailing list for the SBIR and STTR solicitations, send in the Mailing List form (Reference E). You may also order additional copies of this solicitation from:

DoD SBIR Support Services

2850 Metro Drive, Suite 600

Minneapolis, MN 55425-1566

(800) 382-4634

The solicitations can also be accessed via Internet through the DoD SBIR/STTR Home Page at <http://www.acq.osd.mil/sadbu/sbir>.

1.7 SBIR Conferences and Outreach

The DoD holds three National SBIR Conferences a year and participates in many state-organized conferences for small business. For information on these events, see our Home Page (<http://www.acq.osd.mil/sadbu/sbir>). We have a special outreach effort to socially and economically and disadvantaged firms.

2.0 DEFINITIONS

The following definitions apply for the purposes of this solicitation:

2.1 Research or Research and Development

Basic Research - Scientific study and experimentation to provide fundamental knowledge required for the solution of problems.

Exploratory Development - A study, investigation or minor development effort directed toward specific problem areas with a view toward developing and evaluating the feasibility and practicability of proposed solutions.

Advanced Development - Proof of design efforts directed toward projects that have moved into the development of hardware for test.

Engineering Development - Full-scale engineering development projects for DoD use but which have not yet received approval for production.

2.2 Small Business

A small business concern is one that, at the time of award of a Phase I or Phase II contract:

a. Is independently owned and operated and organized for profit, is not dominant in the field of operation in which it is proposing, and has its principal place of business located in the United States;

b. Is at least 51% owned, or in the case of a publicly owned business, at least 51% of its voting stock is owned by United States citizens or lawfully admitted permanent resident aliens;

A socially and economically disadvantaged individual is defined as a member of any of the following groups: Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent-Asian Americans, or other groups designated by SBA to be socially and economically disadvantaged.

2.4 Women-Owned Small Business

A women-owned small business is one that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context

c. Has, including its affiliates, a number of employees not exceeding 500, and meets the other regulatory requirements found in 13 CFR Part 121. Business concerns, other than investment companies licensed, or state development companies qualifying under the Small Business Investment Act of 1958, 15 USC 661, et seq., are affiliates of one another when either directly or indirectly (1) one concern controls or has the power to control the other; or (2) a third party or parties controls or has the power to control both. Control can be exercised through common ownership, common management, and contractual relationships. The term "affiliates" is defined in greater detail in 13 CFR Sec. 121.103. The term "number of employees" is defined in 13 CFR Sec. 121.106. Business concerns include, but are not limited to, any individual, partnership, corporation, joint venture, association or cooperative.

2.3 Socially and Economically Disadvantaged Small Business

A small business that is at the time of award of a Phase I or Phase II contract:

a. At least 51% owned by an Indian tribe or a native Hawaiian organization, or one or more socially and economically disadvantaged individuals, and

b. Whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals.

means being actively involved in the day-to-day management of the business.

2.5 Funding Agreement

Any contract, grant, or cooperative agreement entered into between any Federal Agency and any small business

concern for the performance of experimental, developmental, or research work funded in whole or in part by the federal Government. *Only the contract method will be used by DoD components for all SBIR awards.*

2.6 Subcontract

A subcontract is any agreement, other than one involving an employer-employee relationship, entered into by a Federal Government contract awardee calling for

supplies or services required solely for the performance of the original contract. This includes consultants.

2.7 Commercialization

The process of developing a product or non-R&D service for sale (whether by the originating party or by others), in Government and/or private sector markets.

3.0 PROPOSAL PREPARATION INSTRUCTIONS AND REQUIREMENTS

3.1 Proposal Requirements

A proposal to any DoD Component under the SBIR Program is to provide sufficient information to persuade the DoD Component that the proposed work represents an innovative approach to the investigation of an important scientific or engineering problem and is worthy of support under the stated criteria.

The quality of the scientific or technical content of the proposal will be the principal basis upon which proposals will be evaluated. The proposed research or research and development must be responsive to the chosen topic, although need not use the exact approach specified in the topic (see Section 4.1). Any small business contemplating a bid for work on any specific topic should determine that (a) the technical approach has a reasonable chance of meeting the topic objective, (b) this approach is innovative, not routine, and (c) the firm has the capability to implement the technical approach, i.e. has or can obtain people and equipment suitable to the task.

Those responding to this solicitation should note the proposal preparation tips listed below:

- Read and follow all instructions contained in this solicitation, including the instructions in Section 8.0 of the DoD component to which you are applying.

This solicitation is designed to reduce the investment of time and cost to small firms in preparing a formal proposal. Those who wish to respond must submit a direct, concise, and informative research or research and development proposal of no more than 25 pages, excluding Company Commercialization Report (Appendix E), (no type smaller than 11 point or 12 pitch on standard 8_ " X 11" paper with one (1) inch margins, and a maximum of 6 lines per inch), *including Proposal Cover Sheet (Appendix A), Project Summary (Appendix B), Cost Proposal (Appendix C), and any enclosures or attachments.* Promotional and non-project related discussion is discouraged. Cover all items listed below in Section 3.4 in the order given. The space allocated to each will depend on the problem chosen and the principal investigator's approach. In the interest of equity, proposals in excess of the 25-page limitation (including attachments, appendices, or references, but excluding Company Commercialization Report (Appendix E)) will not be considered for review or award.

- Use the free technical information services from DTIC and other information assistance organizations (Section 7.1 - 7.4).
- Mark proprietary information as instructed in Sec. 5.5.
- Limit your proposal to 25 pages (excluding Company Commercialization Report).
- Use a type size no smaller than 12 pitch or 11 point.
- Do not include proprietary or classified information in the project summary (Appendix B).
- Include a copy of Appendix A, Appendix B, and Appendix E as part of the original of each proposal. (Additional copies of all Appendices can be downloaded from <http://www.acq.osd.mil/sadbu/sbir>).
- Do not use a proportionally spaced font on Appendix A and Appendix B.

3.2 Proprietary Information

If information is provided which constitutes a trade secret, proprietary, commercial or financial information, confidential personal information, or data affecting the national security, it will be treated in confidence to the extent permitted by law, provided it is clearly marked in accordance with Section 5.5.

3.3 Limitations on Length of Proposal

3.4 Phase I Proposal Format

All pages shall be consecutively numbered and the ORIGINAL of each proposal must contain a completed copy of Appendix A, Appendix B and Appendix E.

a. Cover Sheet. Complete and sign Appendix A, photocopy the completed form, and use a copy as Page 1 of each additional copy of your proposal.

b. Project Summary. Complete Appendix B, photocopy the completed form, and use a copy as Page 2 of each additional copy of your proposal. The technical abstract should include a brief description of the project objectives and description of the effort. Anticipated benefits and commercial applications of the proposed research or research and development should also be summarized in the space provided. The Project Summaries

of proposals selected for award will be publicly released on the Internet and, therefore, should not contain proprietary or classified information.

c. Identification and Significance of the Problem or Opportunity. Define the specific technical problem or opportunity addressed and its importance. (Begin on Page 3 of your proposal.)

d. Phase I Technical Objectives. Enumerate the specific objectives of the Phase I work, including the questions it will try to answer to determine the feasibility of the proposed approach.

e. Phase I Work Plan. Provide an explicit, detailed description of the Phase I approach. The plan should indicate what is planned, how and where the work will be carried out, a schedule of major events, and the final product to be delivered. Phase I effort should attempt to determine the technical feasibility of the proposed concept. The methods planned to achieve each objective or task should be discussed explicitly and in detail. This section should be a substantial portion of the total proposal.

f. Related Work. Describe significant activities directly related to the proposed effort, including any conducted by the principal investigator, the proposing firm, consultants, or others. Describe how these activities interface with the proposed project and discuss any planned coordination with outside sources. The proposal must persuade reviewers of the proposer's awareness of the state-of-the-art in the specific topic.

Describe previous work not directly related to the proposed effort but similar. Provide the following: (1) short description, (2) client for which work was performed (including individual to be contacted and phone number), and (3) date of completion.

g. Relationship with Future Research or Research and Development.

1. Prior, Current, or Pending Support of Similar Proposals or Awards. *Warning --* While it is permissible, with proposal notification, to submit identical proposals or proposals containing a significant amount of essentially equivalent work for consideration under numerous federal program solicitations, it is unlawful to enter into contracts or grants requiring essentially equivalent effort. If there is any question concerning this, it must be disclosed to the soliciting agency or agencies before award.

If a proposal submitted in response to this solicitation is substantially the same as another proposal that has been funded, is now being funded, or is pending with another Federal Agency or DoD Component or the same DoD Component, the proposer must so indicate on Appendix A and provide the following information:

- (1) Name and address of the Federal Agency(s) or DoD Component to which a proposal was submitted, will be submitted, or from which an award is expected or has been received.
- (2) Date of proposal submission or date of award.
- (3) Title of proposal.

- (1) State the anticipated results of the proposed approach if the project is successful.
- (2) Discuss the significance of the Phase I effort in providing a foundation for Phase II research or research and development effort.

h. Commercialization Strategy. Describe, in approximately one page, your company's strategy for converting your proposed SBIR research into a product or non-R&D service with widespread commercial use -- including private sector and/or military markets.

i. Key Personnel. Identify key personnel who will be involved in the Phase I effort including information on directly related education and experience. A concise resume of the principal investigator, including a list of relevant publications (if any), must be included.

j. Facilities/Equipment. Describe available instrumentation and physical facilities necessary to carry out the Phase I effort. Items of equipment to be purchased (as detailed in Appendix C) shall be justified under this section. Also state whether or not the facilities where the proposed work will be performed meet environmental laws and regulations of federal, state (name) and local Governments for, but not limited to, the following groupings: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.

k. Consultants. Involvement of university or other consultants in the project may be appropriate. If such involvement is intended, it should be described in detail and identified in Appendix C. A minimum of two-thirds of the research and/or analytical work in Phase I, as measured by dollars of labor effort, must be carried out by the proposing firm, unless otherwise approved in writing by the contracting officer.

- (4) Name and title of principal investigator for each proposal submitted or award received.
- (5) Title, number, and date of solicitation(s) under which the proposal was submitted, will be submitted, or under which award is expected or has been received.
- (6) If award was received, state contract number.
- (7) Specify the applicable topics for each SBIR proposal submitted or award received.

Note: If Section 3.4.1 does not apply, state in the proposal "No prior, current, or pending support for proposed work."

m. Cost Proposal. Complete the cost proposal in the form of Appendix C for the Phase I effort only. Some items of Appendix C may not apply to the proposed project. If such is the case, there is no need to provide information on each and every item. What matters is that enough information be provided to allow the DoD Component to understand how the proposer plans to use the requested funds if the contract is awarded.

- (1) List all key personnel by name as well as by number of hours dedicated to the project as direct labor.
- (2) Special tooling and test equipment and material cost may be included under Phases I and II. The inclusion of equipment and material will be carefully reviewed relative to need and appropriateness for the work proposed. The purchase of special tooling and test equipment must, in the opinion of the Contracting Officer, be advantageous to the Government and should be related directly to the specific topic. These may include such items as innovative instrumentation and/or automatic test equipment. Title to property furnished by the Government or acquired with Government funds will be vested with the DoD Component, unless it is determined that transfer of title to the contractor would be more cost effective than recovery of the equipment by the DoD Component.
- (3) Cost for travel funds must be justified and related to the needs of the project.
- (4) Cost sharing is permitted for proposals under this solicitation; however, cost sharing is not required nor will it be an evaluation factor in the consideration of a Phase I proposal.

n. Company Commercialization Report on Prior SBIR Awards. All small business concerns submitting a Phase I or Phase II proposal must complete Appendix E (Company Commercialization Report), listing the commercialization status of the concern's prior Phase II efforts. (This required proposal information shall not be counted toward proposal pages count limitations.) A Report showing that a small business concern has received no prior Phase II awards will not affect the concern's ability to obtain an SBIR award.

3.5 Bindings

Do not use special bindings or covers. Staple the pages in the upper left hand corner of each proposal.

3.6 Phase II Proposal Format

This solicitation is for Phase I only. A Phase II proposal can be submitted only by a Phase I awardee and only in response to a request from the agency; that is, Phase II is not initiated by a solicitation.

Each Phase II proposal must contain a Cover Sheet (Appendix A), a Project Summary Sheet (Appendix B), and a Company Commercialization Report (Appendix E). In addition, each Phase II proposal must contain a two-page commercialization strategy, addressing the following questions:

- (1) What is the first product that this technology will go into?
- (2) Who will be your customers, and what is your estimate of the market size?
- (3) How much money will you need to bring the technology to market, and how will you raise that money?

- (4) Does your company contain marketing expertise and, if not, how do you intend to bring that expertise into the company?
- (5) Who are your competitors, and what is your price and/or quality advantage over your competitors?

Copies of Appendices along with additional instructions regarding Phase II proposal preparation and submission will be provided by the DoD Components to all Phase I winners at time of Phase I contract award.

4.0 METHOD OF SELECTION AND EVALUATION CRITERIA

4.1 Introduction

Phase I proposals will be evaluated on a competitive basis and will be considered to be binding for six (6) months from the date of closing of this solicitation unless offeror states otherwise. If selection has not been made prior to the proposal's expiration date, offerors will be requested as to whether or not they want to extend their proposal for an additional period of time. Proposals meeting stated solicitation requirements will be evaluated by scientists or engineers knowledgeable in the topic area. Proposals will be evaluated first on their relevance to the chosen topic. A proposal that meets the goals of a solicitation topic but does not use the exact approach specified in the topic will be considered relevant. (Prospective proposers should contact the topic author as described in Section 1.5 to determine whether submission of such a proposal would be useful.)

Proposals found to be relevant will then be evaluated using the criteria listed in Section 4.2. Final decisions will be made by the DoD Component based upon these criteria and consideration of other factors including possible duplication of other work, and program balance. A DoD Component may elect to fund several or none of the proposed approaches to the same topic. In the evaluation and handling of proposals, every effort will be made to protect the confidentiality of the proposal and any evaluations. There is no commitment by the DoD Components to make any awards on any topic, to make a specific number of awards or to be responsible for any monies expended by the proposer before award of a contract.

For proposals that have been selected for contract award, a Government Contracting Officer will draw up an appropriate contract to be signed by both parties before work begins. Any negotiations that may be necessary will be conducted between the offeror and the Government Contracting Officer. It should be noted that only a duly appointed contracting officer has the authority to enter into a contract on behalf of the U.S. Government.

Phase II proposals will be subject to a technical review process similar to Phase I. Final decisions will be made by DoD Components based upon the scientific and technical evaluations and other factors, including a commitment for Phase III follow-on funding, the possible duplication with other research or research and development, program balance, budget limitations, and the potential of a successful Phase II effort leading to a product of continuing interest to DoD.

Upon written request and after final award decisions have been announced, a debriefing will be provided to unsuccessful offerors on their proposals.

- d. The qualifications of the proposed principal/key investigators supporting staff and consultants. Qualifications include not only the ability to perform the research and development but also the ability to commercialize the results.

4.2 Evaluation Criteria - Phase I

The DoD Components plan to select for award those proposals offering the best value to the Government and the nation considering the following factors.

- a. The soundness and technical merit of the proposed approach and its incremental progress toward topic or subtopic solution
- b. The potential for commercial (Government or private sector) application and the benefits expected to accrue from this commercialization
- c. The adequacy of the proposed effort for the fulfillment of requirements of the research topic
- d. The qualifications of the proposed principal/key investigators supporting staff and consultants. Qualifications include not only the ability to perform the research and development but also the ability to commercialize the results.

Where technical evaluations are essentially equal in merit, cost to the Government will be considered in determining the successful offeror. Evaluators may also consider the effect of work that the proposer anticipates subcontracting to others for performance outside the United States, as discussed in Section 1.3.

Technical reviewers will base their conclusions only on information contained in the proposal. It cannot be assumed that reviewers are acquainted with the firm or key individuals or any referenced experiments. Relevant supporting data such as journal articles, literature, including Government publications, etc., should be contained or referenced in the proposal.

4.3 Evaluation Criteria - Phase II

The Phase II proposal will be reviewed for overall merit based upon the criteria below.

- a. The soundness and technical merit of the proposed approach and its incremental progress toward topic or subtopic solution.
- b. The potential for commercial (Government or private sector) application and the benefits expected to accrue from this commercialization. In particular, proposals that show strong evidence of commercial potential by qualifying for the Fast Track (Section 4.5) will receive the Department's highest priority for Phase II award, and a significantly higher percentage of such proposals will be selected for Phase II award.
- c. The adequacy of the proposed effort for the fulfillment of requirements of the research topic.

The reasonableness of the proposed costs of the effort to be performed will be examined to determine those proposals that offer the best value to the Government. Where technical evaluations are essentially equal in merit,

cost to the Government will be considered in determining the successful offeror. Evaluators may also consider the effect of work that the proposer anticipates subcontracting to others for performance outside the United States, as discussed in Section 1.3.

Phase II proposal evaluation may include on-site evaluations of the Phase I effort by Government personnel.

4.4 Assessing Commercial Potential of Proposals

A Phase I or Phase II proposal's commercial potential can be evidenced by:

- a. The small business concern's record of commercializing SBIR or other research, particularly as reflected in its Company Commercialization Report (Appendix E).
- b. The existence of second phase funding commitments from private sector or non-SBIR funding sources -- especially matching commitments provided under the Fast Track (see Section 4.5).
- c. The existence of third phase follow-on commitments for the subject of the research.
- d. The presence of other indicators of commercial potential of the idea, including the small business' commercialization strategy (discussed in Sections 3.4h and 3.6, above).

If a company chooses to submit a third phase follow-on commitment per (3) above, the commitment should state that the small business or a third party will provide follow-on funding in Phase III, and indicate the dates on which the funds will be made available. The commitment should also contain specific technical objectives which, if achieved in Phase II, will make the commitment exercisable by the small business. The terms should not be contingent upon the obtaining of a patent due to the length of time this process requires. The funding commitment should be submitted with the Phase II proposal.

4.5 SBIR Fast Track

a. In General. On a two-year pilot basis, the DoD SBIR program will implement a fast-track SBIR process for companies which, during their Phase I projects, attract independent third-party investors that will match both phase II SBIR funding and interim SBIR funding (between Phases I and II). As discussed in detail below, companies which obtain such third-party matching funds and thereby

- (b) For companies that have received 5 or more Phase II SBIR awards from the federal Government (including DoD), the minimum matching rate is 1 dollar for every SBIR dollar. (For example, if such a company receives an interim SBIR award of \$40,000 and a Phase II award of \$750,000, it must obtain matching funds of \$40,000 and \$750,000 respectively for the two awards.)
- (c) For all other companies, the minimum matching rate is 50 cents for every SBIR dollar. (For

qualify for the SBIR Fast Track will receive (subject to the qualifications described herein):

- (1) Interim funding on the order of \$40,000 (generally, \$30,000 to \$50,000) between Phases I and II;
- (2) The Department's highest priority for Phase II SBIR funding; and
- (3) An expedited Phase II selection decision and, upon selection, an expedited Phase II award.

b. How To Qualify for the SBIR Fast Track. To qualify for the SBIR Fast Track, a company must submit the following items, within 120 days after the effective start date of its Phase I contract, to the same address the company would send its Phase II proposal (see back of Appendix D):

- (1) A completed fast-track application form, found at Appendix D. (IMPORTANT: Please also send a copy to OSD SBIR -- see back of Appendix D.)
- (2) A commitment letter from an independent third-party investor -- such as another company, a venture capital firm, an "angel" investor, or a non-SBIR Government program -- indicating that the third-party investor will match both interim and Phase II SBIR funding, in cash, contingent upon the company's receipt of interim and Phase II SBIR funds. For guidance on what types of relationships between a small company and outside investors in the company meet the conditions for the Fast Track, see "Official Fast Track Guidance" on our Home Page (<http://www.acq.osd.mil/sadbu/sbir>), or contact the DoD SBIR Help Desk (tel. 800/382-4634).

The matching rates are as follows:

- (a) For companies that have 10 or fewer employees and have never received a Phase II SBIR award from DoD or any other Federal Agency, the minimum matching rate is 25 cents for every SBIR dollar. (For example, if such a company receives an interim SBIR award of \$40,000 and a Phase II award of \$750,000, it must obtain matching funds of \$10,000 and \$187,500 respectively for the two awards.)

example, if such a company receives an interim SBIR award of \$40,000 and a Phase II award of \$750,000, it must obtain matching funds of \$20,000 and \$375,000 respectively for the two awards.)

The commitment letter should indicate that the third-party funds will pay for work that is connected to the particular SBIR project, and should describe the general nature of that work. The work funded by the third-party investor may be additional research and development on the

project or, alternatively, it may be other activity related to the project (e.g., marketing) that is outside the scope of the SBIR contract.

- (3) A concise statement of work and cost proposal for the interim SBIR effort (if an interim option was not previously negotiated on the Phase I contract). The statement of work should be under 4 pages in length, and the cost proposal should be under 1 page in length.
- (4) A concise report on the status of the Phase I project, if required by the DoD component that is funding the project. This report should be under 4 pages in length.

In addition:

- (1) The company must submit its Phase II proposal no later than 30 days prior to completion of its Phase I project, unless a different deadline for fast-track Phase II proposals is specified in the Phase II proposal instructions of the sponsoring DoD component.
- (2) If the company receives an interim and/or Phase II SBIR award from DoD, its matching funds must arrive before corresponding installments of SBIR funds are released. For example, a company whose matching rate is 50 cents to the dollar must certify, to the satisfaction of its DoD contracting officer, that it has received \$20,000 in cash from the third-party investor before the contracting officer will release \$40,000 in interim SBIR funds. Similarly, the company must certify that it has received \$30,000 in third-party funds before the contracting officer will release a \$60,000 installment of phase II funds. (A simple letter stating that the third-party funds have arrived, with an attached copy of the bank statement, should generally suffice.)

Failure to meet these conditions in their entirety and within the time frames indicated will generally disqualify a company from participation in the SBIR Fast Track. Deviations from these conditions must be approved in writing by the contracting officer. If disqualified, the company will still be eligible to compete for a Phase II SBIR award through the regular procedures.

c. Benefits of Qualifying for the Fast Track. A company which qualifies for the Fast Track will:

- (1) Receive interim SBIR funding on the order of \$40,000 (generally, \$30,000 to \$50,000), commencing at the end of Phase I.

Note: It is DoD policy that the vast majority of Phase I contracts which qualify for the Fast Track will receive interim SBIR funding. However, the DoD contracting office has the discretion and authority, in any particular instance, to deny interim funding to a Phase I contractor when doing so is in the

Government's interest (e.g., when the project no longer meets a military need).

- (2) Receive the Department's highest priority for Phase II award. Specifically, it is DoD policy that the percentage of fast-track Phase I projects which receive Phase II awards will be significantly higher than the overall percentage of Phase I projects which receive Phase II awards. (Historically, roughly one-third of Phase I projects at DoD receive Phase II awards.)
- (3) Receive notification of whether it has been selected for a Phase II award, within an average of two months -- and, in all cases, no longer than ten weeks -- after the completion of its Phase I project.
- (4) If selected, receive its Phase II award within an average of five months from the completion of its Phase I project.

5.0 CONTRACTUAL CONSIDERATIONS

Note: Eligibility and Limitation Requirements (Section 1.4) Will Be Enforced

5.1 Awards (Phase I)

a. Number of Phase I Awards. The number of Phase I awards will be consistent with the agency's RDT&E budget, the number of anticipated awards for interim Phase I modifications, and the number of anticipated Phase II contracts. No Phase I contracts will be awarded until all qualified proposals (received in accordance with Section 6.2) on a specific topic have been evaluated. All proposers will be notified of selection/non-selection status for a Phase I award no later than January 16, 1998. *The DoD Components anticipate making 450 Phase I awards from this solicitation.* On average, 1 in 8 Phase I proposals receive funding.

b. Type of Funding Agreement. All winning proposals will be funded under negotiated contracts and may include a fee or profit. The firm fixed price or cost plus fixed fee type contract will be used for all Phase I projects (see Section 5.4). *Note: The firm fixed price contract is the preferred type for Phase I.*

c. Average Dollar Value of Awards. DoD Components will make Phase I awards to small businesses typically on a one-half person-year effort over a period generally not to exceed six months (subject to negotiation). PL 102-564 allows agencies to award Phase I contracts up to \$100,000 without justification. Where applicable, specific funding instructions are contained in Section 8 for each DoD Component.

5.2 Awards (Phase II)

a. Number of Phase II Awards. The number of Phase II awards will depend upon the results of the Phase I efforts and the availability of funds. *The DoD Components anticipate that approximately one-third of its Phase I awards will result in Phase II projects.*

b. Type of Funding Agreement. Each Phase II proposal selected for award will be funded under a negotiated contract and may include a fee or profit.

c. Project Continuity. Phase II proposers who wish to maintain project continuity must submit proposals no later than 30 days prior to the expiration date of the Phase I contract and must identify in their proposal the work to be performed for the first four months of the Phase II effort and the costs associated therewith. *These Phase II proposers may be issued a modification to the Phase I contract, at the discretion of the Government,* covering an interim period not to exceed four months for preliminary (3) Block 13 (Abstract) of the SF 298, "Report Documentation Page") must include as the first sentence, "Report developed under SBIR contract". The abstract must identify the purpose of the work and briefly describe the work carried out, the finding or

Phase II work while the total Phase II proposal is being evaluated and a contract is negotiated. This modification would normally become effective at the completion of Phase I or as soon thereafter as possible. Funding, scope of work, and length of performance for this interim period will be subject to negotiations. Issuance of a contract modification for the interim period does not commit the Government to award a Phase II contract. See special instructions for each DoD Component in Section 8. *(For Phase I projects which qualify for the SBIR Fast Track, the instructions in Section 4.5 supersede those in this paragraph.)*

d. Average Dollar Value of Awards. Phase II awards will be made to small businesses based on results of the Phase I efforts and the scientific, technical, and commercial merit of the Phase II proposal. Average Phase II awards will typically cover 2 to 5 person-years of effort over a period generally not to exceed 24 months (subject to negotiation). PL 102-564 states that the Phase II awards may be up to \$750,000 each without justification. See special instructions for each DoD Component in Section 8.

5.3 Phase I Report

a. Content. A final report is required for each Phase I project. The report must contain in detail the project objectives, work performed, results obtained, and estimates of technical feasibility. A completed SF 298, "Report Documentation Page", will be used as the first page of the report. In addition, Monthly status and progress reports may be required by the DoD agency. (A blank SF 298 is provided in Section 9.0, Reference D.)

b. Preparation.

- (1) To avoid duplication of effort, language used to report Phase I progress in a Phase II proposal, if submitted, may be used verbatim in the final report with changes to accommodate results after Phase II proposal submission and modifications required to integrate the final report into a self-contained comprehensive and logically structured document.
- (2) Block 12a (Distribution/Availability Statement) of the SF298, "Report Documentation Page" in each unclassified final report must contain one of the following statements:
 - (a) Approved for public release; distribution unlimited.
 - (b) Distribution authorized to U.S. Government Agencies only; contains proprietary information.

results and the potential applications of the effort. Since the abstract will be published by the DoD, it must not contain any proprietary or classified data.

- (4) Block 14 (Subject Terms) of the SF 298 must include the term "SBIR Report".

c.Submission. SIX COPIES of the final report on each Phase I project shall be submitted to the DoD in accordance with the negotiated delivery schedule. Delivery will normally be within thirty days after completion of the Phase I technical effort. One copy of each unclassified report shall be delivered directly to the DTIC, ATTN: Document Acquisition, 8725 John J Kingman Road, Suite 0944, Ft. Belvoir, VA 22060-6218.

5.4 Other Reports

If asked, the contractor will be required to provide DoD with a report during Phase II, and each year for five years after completion of Phase II, detailing: (1) the revenue from sales of new products or non-R&D services resulting from the SBIR project, and (2) the sources and amounts of non-SBIR, non-STTR funding received from the Government and/or private sector sources to further develop the SBIR technology.

5.5 Payment Schedule

The specific payment schedule (including payment amounts) for each contract will be incorporated into the contract upon completion of negotiations between the DoD and the successful Phase I or Phase II offeror. Successful offerors may be paid periodically as work progresses in accordance with the negotiated price and payment schedule. Phase I contracts are primarily fixed price contracts, under which monthly payments may be made. The contract may include a separate provision for payment of a fee or profit. Final payment will follow completion of contract performance and acceptance of all work required under the contract. Other types of financial assistance may be available under the contract.

5.6 Markings of Proprietary or Classified Proposal Information

The proposal submitted in response to this solicitation may contain technical and other data which the proposer does not want disclosed to the public or used by the Government for any purpose other than proposal evaluation.

Information contained in unsuccessful proposals will remain the property of the proposer except for Appendices A and B. The Government may, however, retain copies of all proposals. Public release of information in any proposal

In the event properly marked data contained in a proposal in response to this solicitation is requested pursuant to the Freedom of Information Act, 5 USC 552, the proposer will be advised of such request and prior to such release of information will be requested to expeditiously submit to the DoD Component a detailed listing of all information in the proposal which the proposer believes to be exempt from disclosure under the Act. Such action and cooperation on the part of the proposer will ensure that any information released by the DoD Component pursuant to the Act is properly determined.

submitted will be subject to existing statutory and regulatory requirements.

If proprietary information is provided by a proposer in a proposal which constitutes a trade secret, proprietary commercial or financial information, confidential personal information or data affecting the national security, it will be treated in confidence, to the extent permitted by law, provided this information is clearly marked by the proposer with the term "confidential proprietary information" and provided that the following legend which appears on the title page (Appendix A) of the proposal is completed:

"For any purpose other than to evaluate the proposal, this data except Appendix A and B shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed in whole or in part, provided that if a contract is awarded to the proposer as a result of or in connection with the submission of this data, the Government shall have the right to duplicate, use or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in the data if it is obtained from another source without restriction. The data subject to this restriction is contained in page(s)_____ of this proposal."

Any other legend may be unacceptable to the Government and may constitute grounds for removing the proposal from further consideration and without assuming any liability for inadvertent disclosure. The Government will limit dissemination of properly marked information to within official channels.

In addition, each page of the proposal containing proprietary data which the proposer wishes to restrict must be marked with the following legend:

"Use or disclosure of the proposal data on lines specifically identified by asterisk (*) are subject to the restriction on the cover page of this proposal."

If all of the information on a particular page is proprietary, the proposer should so note by including the word "PROPRIETARY" in both the header and footer on that page.

The Government assumes no liability for disclosure or use of unmarked data and may use or disclose such data for any purpose.

Those proposers that have a classified facility clearance may submit classified material with their proposal. Any classified material shall be marked and handled in accordance with applicable regulations. Arbitrary and unwarranted use of this restriction is discouraged. Offerors must follow the Industrial Security Manual for Safeguarding Classified Information (DoD 5220.22M) procedures for marking and handling classified material.

5.7 Copyrights

To the extent permitted by statute, the awardee may copyright (consistent with appropriate national security considerations, if any) material developed with DoD support. DoD receives a royalty-free license for the Federal Government and requires that each publication contain an appropriate acknowledgement and disclaimer statement.

5.8 Patents

Small business firms normally may retain the principal worldwide patent rights to any invention developed with Government support. The Government receives a royalty-free license for its use, reserves the right to require the patent holder to license others in certain limited circumstances, and requires that anyone exclusively licensed to sell the invention in the United States must normally manufacture it domestically. To the extent authorized by 35 USC 205, the Government will not make public any information disclosing a Government-supported invention for a period of five years to allow the awardee to pursue a patent.

5.9 Technical Data Rights

Rights in technical data, including software, developed under the terms of any contract resulting from proposals submitted in response to this solicitation generally remain with the contractor, except that the Government obtains a royalty-free license to use such technical data only for Government purposes during the period commencing with contract award and ending five years after completion of the project under which the data were generated. Upon expiration of the five-year restrictive license, the Government has unlimited rights in the SBIR data. During the license period, the Government may not release or disclose SBIR data to any person other than its support services contractors except: (1) For evaluational purposes; (2) As expressly permitted by the contractor; or (3) A use, release, or disclosure that is necessary for emergency repair or overhaul of items operated by the Government. See FAR clause 52.227-20, "Rights in Data - SBIR Program" and DFARS 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software -- SBIR Program."

5.10 Cost Sharing

Cost sharing is permitted for proposals under this solicitation; however, cost sharing is not required nor will

c. Examination of Records. The Comptroller General (or a fully authorized representative) shall have the right to examine any directly pertinent records of the contractor involving transactions related to this contract.

d. Default. The Government may terminate the contract if the contractor fails to perform the work contracted.

e. Termination for Convenience. The contract may be terminated at any time by the Government if it deems termination to be in its best interest, in which case the

it be an evaluation factor in the consideration of any Phase I proposal.

5.11 Joint Ventures or Limited Partnerships

Joint ventures and limited partnerships are eligible provided the entity created qualifies as a small business as defined in Section 2.2 of this solicitation.

5.12 Research and Analytical Work

a. For Phase I a minimum of two-thirds of the research and/or analytical work must be performed by the proposing firm unless otherwise approved in writing by the contracting officer.

b. For Phase II a minimum of one-half of the research and/or analytical work must be performed by the proposing firm, unless otherwise approved in writing by the contracting officer.

The percentage of work is usually measured in dollars of labor effort, although proposers planning to subcontract a significant fraction of their work should verify how it will be measured with their contracting officer during contract negotiations.

5.13 Contractor Commitments

Upon award of a contract, the contractor will be required to make certain legal commitments through acceptance of Government contract clauses in the Phase I contract. The outline that follows is illustrative of the types of provisions required by the Federal Acquisition Regulations that will be included in the Phase I contract. This is not a complete list of provisions to be included in Phase I contracts, nor does it contain specific wording of these clauses. Copies of complete general provisions will be made available prior to award.

a. Standards of Work. Work performed under the contract must conform to high professional standards.

b. Inspection. Work performed under the contract is subject to Government inspection and evaluation at all reasonable times.

contractor will be compensated for work performed and for reasonable termination costs.

f. Disputes. Any dispute concerning the contract which cannot be resolved by agreement shall be decided by the contracting officer with right of appeal.

g. Contract Work Hours. The contractor may not require an employee to work more than eight hours a day or forty hours a week unless the employee is compensated accordingly (that is, receives overtime pay).

h. Equal Opportunity. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

i. Affirmative Action for Veterans. The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era.

j. Affirmative Action for Handicapped. The contractor will not discriminate against any employee or applicant for employment because he or she is physically or mentally handicapped.

k. Officials Not to Benefit. No member of or delegate to Congress shall benefit from the contract.

l. Covenant Against Contingent Fees. No person or agency has been employed to solicit or secure the contract upon an understanding for compensation except bona fide employees or commercial agencies maintained by the contractor for the purpose of securing business.

m. Gratuities. The contract may be terminated by the Government if any gratuities have been offered to any representative of the Government to secure the contract.

n. Patent Infringement. The contractor shall report each notice or claim of patent infringement based on the performance of the contract.

o. Military Security Requirements. The contractor shall safeguard any classified information associated with the contracted work in accordance with applicable regulations.

p. American Made Equipment and Products. When purchasing equipment or a product under the SBIR funding agreement, purchase only American-made items whenever possible.

5.14 Additional Information

a. General. This Program Solicitation is intended for information purposes and reflects current planning. If there

is any inconsistency between the information contained herein and the terms of any resulting SBIR contract, the terms of the contract are controlling.

b. Small Business Data. Before award of an SBIR contract, the Government may request the proposer to submit certain organizational, management, personnel, and financial information to confirm responsibility of the proposer.

c. Proposal Preparation Costs. The Government is not responsible for any monies expended by the proposer before award of any contract.

d. Government Obligations. This Program Solicitation is not an offer by the Government and does not obligate the Government to make any specific number of awards. Also, awards under this program are contingent upon the availability of funds.

e. Unsolicited Proposals. The SBIR Program is not a substitute for existing unsolicited proposal mechanisms. Unsolicited proposals will not be accepted under the SBIR Program in either Phase I or Phase II.

f. Duplication of Work. If an award is made pursuant to a proposal submitted under this Program Solicitation, the contractor will be required to certify that he or she has not previously been, nor is currently being, paid for essentially equivalent work by an agency of the Federal Government.

g. Classified Proposals. If classified work is proposed or classified information is involved, the offeror to the solicitation must have, or obtain, security clearance in accordance with the Industrial Security Manual for Safeguarding Classified Information (DoD 5220.22M). The Manual is available on-line at <http://www.dis.mil> or in hard copy from:

Defense Investigative Service
1340 Braddock Place
Alexandria, VA 22314
Phone: (703) 325-5324

6.0 SUBMISSION OF PROPOSALS

An original plus (4) copies of each proposal or modification will be submitted, in a single package, as described below, unless otherwise stated by specific instructions in Section 8.0.

NOTE: THE ORIGINAL OF EACH PROPOSAL MUST CONTAIN A COMPLETED APPENDIX A (COVER SHEET), APPENDIX B (PROJECT SUMMARY), AND APPENDIX E (COMPANY COMMERCIALIZATION REPORT).

6.1 Address

Each proposal or modification package must be addressed to that DoD Component address which is identified for the specific topic in that Component's subsection of Section 8.0 to this solicitation.

The name and address of the offeror, the solicitation number and the topic number for the proposal must be clearly marked on the face of the envelope or wrapper.

Mailed or handcarried proposals must be delivered to the address indicated for each topic. Secured packaging is

mandatory. The DoD Component cannot be responsible for the processing of proposals damaged in transit.

All copies of a proposal must be sent in the same package. Do not send separate information copies or several packages containing parts of the single proposal.

6.2 Deadline of Proposals

Deadline for receipt of proposals at the DoD Component is 2:00 p.m. local time, July 16, 1997. Any proposal received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before an award is made, and: (a) it was sent by registered or certified mail not later than July 8, 1997 or (b) it was sent by mail and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation.

Note: There are no other provisions for late receipt of proposals under this solicitation.

The only acceptable evidence to establish (a) the date of mailing of a late-received proposal sent either by registered mail or certified mail is the U. S. Postal Service postmark on the wrapper or on the original receipt from the U.S. Postal Service. If neither postmark shows a legible date, the proposal shall be deemed to have been mailed late. The term postmark means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed on the date of mailing by employees of the U. S. Postal Service. Therefore, offerors should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper; (b) the time of receipt at the Government installation is the time-date stamp of such installation on the proposal wrapper or other documentary evidence of receipt maintained by the installation.

Proposals may be withdrawn by written notice or a telegram received at any time prior to award. Proposals may also be withdrawn in person by an offeror or his

6.6 Correspondence Relating to Proposals

All correspondence relating to proposals should cite the SBIR solicitation number and specific topic number and

authorized representative, provided his identity is made known and he signs a receipt for the proposal. (NOTE: the term telegram includes mailgrams.)

Any modification or withdrawal of a proposal is subject to the same conditions outlined above. Any modification may not make the proposal longer than 25 pages (excluding Company Commercialization Report). Notwithstanding the above, a late modification of an otherwise successful proposal which makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

6.3 Notification of Proposal Receipt

Proposers desiring notification of receipt of their proposal must complete and include a self-addressed stamped envelope and a copy of the notification form (Reference A) in the back of this brochure. If multiple proposals are submitted, a separate form and envelope is required for each. Notification of receipt of a proposal by the Government does not by itself constitute a determination that the proposal was received on time or not. The determination of timeliness is solely governed by the criteria set forth in Section 6.2.

6.4 Information on Proposal Status

Evaluation of proposals and award of contracts will be expedited, but no information on proposal status will be available until the final selection is made. However, contracting officers may contact any and all qualified proposers prior to contract award.

6.5 Debriefing of Unsuccessful Offerors

Upon written request and after final award decisions have been announced, a debriefing will be provided to unsuccessful offerors for their proposals. The written request should be sent to the DoD organization that notified the proposer that the proposal was not selected for award.

should be addressed to the DoD Component whose address is associated with the specific topic number.

7.0 SCIENTIFIC AND TECHNICAL INFORMATION ASSISTANCE

7.1 DoD Technical Information Services Available

Recognizing that small businesses may not have strong technical information service support, the Defense Technical Information Center (DTIC) provides information access, much of it at no cost, to assist SBIR participants in bid-making decisions and in the preparation of proposals.

DTIC, a major component of the DoD Scientific and Technical Information Program, serves DoD as well as other federal agencies and their contractors by managing

the technical information resulting from by DoD-funded research and development.

DTIC also provides access to specialized reference services and subject matter expertise within the DoD-sponsored Centers for Analysis of Scientific and Technical Information (IACs) which are concerned with engineering, technical and scientific documents and databases worldwide.

For the majority of SBIR topics, DTIC prepares a Technical Information Package (TIP), a bibliographic

listing of DoD-funded work in technical areas relating to the topic. TIPs also may include information provided by the topic author and references to other information sources.

Firms participating in SBIR are strongly encouraged to request the TIPs for their solicitation topic areas. Requests can be made online via the DTIC SBIR Home Page on Internet, by sending Reference B at the back of this solicitation, or by telephone, fax, or email.

DTIC will return requested material, along with a user code, good for the remainder of the fiscal year for use in obtaining additional information or technical reports. A firm may receive a total of ten technical reports at no cost from DTIC during a solicitation period. Additional reports, custom bibliographies, and services outside the solicitation period may be charged to a major credit card or an NTIS deposit account.

Internet services, accessed via the DTIC SBIR Home Page (<http://www.dtic.mil/dtic/sbir>), include TIPs as well as current DoD SBIR and STTR Solicitations and Award Abstracts publications. Solicitation and awards information is also accessible via gopher (<gopher.dtic.mil>) on port 70, or file transfer (<asc.dtic.mil>). The FTP login is "anonymous", password is your E-Mail address, SBIR files are in the /pub/sbir directory. Also on Internet is SITIS for technical questions and answers concerning DoD topic descriptions. See section 7.2 for a complete description of this important service.

Call, or visit (by prearrangement) DTIC at the location most convenient to you. Written communications must be made to the Ft. Belvoir, Va., address.

Defense Technical Information Center
ATTN: DTIC-SBIR
8725 John J Kingman Road, Suite 0944
Ft. Belvoir, VA 22060-6218
(800) 363-7247 (800 DOD-SBIR)

University of Southern California
Technology Transfer Center
3716 South Hope Street, Suite 200
Los Angeles, CA 90007-4344
(800) 872-7477 (outside CA)
(213) 743-6132
(213) 746-9043 (FAX)

Center for Technology Commercialization
Massachusetts Technology Park
100 North Drive
Westborough, MA 01581
(508) 870-0042
(508) 366-0101 (FAX)

Great Lakes Technology Transfer Center/Battelle
25000 Great Northern Corporate Center, Suite 260
Cleveland, OH 44070
(216) 734-0094
(216) 734-0686 (FAX)

Midcontinent Technology Transfer Center
Texas Engineering Experiment Station
The Texas A&M University System

(703) 767-8228 (FAX)
EMail sbir@dtic.mil
WWW <http://www.dtic.mil/dtic/sbir>

DTIC Boston Regional Office
Building 1103, 5 Wright Street
Hanscom AFB
Bedford, MA 01731-5000
(617) 377-2413

DTIC Albuquerque Regional Office
PL/SUL
3550 Aberdeen Ave, SE
Kirtland AFB, NM 87117-6008
(505) 846-6797

DTIC Dayton Regional Office
2690 C Street, Suite 4
Wright-Patterson AFB, OH 45433-7552
(513) 255-7905

DTIC Los Angeles Regional Office
222 N. Sepulveda Blvd., Suite 906
El Segundo, CA 90245-4320
(310) 335-4170

7.2 Other Technical Information Assistance Sources

Other sources provide technology search and/or document services and can be contacted directly for service and cost information. These include:

National Technical Information Services
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4600 (PH)/ (703) 321-8547 (FAX)

301 Tarrow, Suite 119
College Station, TX 77843-8000
(409) 845-8762
(409) 845-3559 (FAX)

Mid-Atlantic Technology Applications Center
University of Pittsburgh
823 William Pitt Union
Pittsburgh, PA 15260
(800) 257-2725
(412) 648-7000
(412) 648-7003 (FAX)

Southern Technology Application Center
University of Florida, College of Engineering
Box 24, One Progress Boulevard
Alachua, FL 32615
(904) 462-3913
(800) 225-0308 (outside FL)
(904) 462-3898 (FAX)

Federal Information Exchange, Inc.
555 Quince Orchard Road, Suite 200
Gaithersburg, MD 20878
(301) 975-0103
(301) 975-0109 (FAX)

7.3 DoD Counseling Assistance Available

Small business firms interested in participating in the SBIR Program may seek general administrative guidance from small and disadvantaged business utilization specialists located in various Defense Contract Management activities throughout the continental United States. These specialists are available to discuss general administrative requirements to facilitate the submission of proposals and ease the entry of the small high technology business into the Department of Defense marketplace. The small and disadvantaged business utilization specialists are expressly prohibited from taking any action which would give an offeror an unfair advantage over others, such as discussing or explaining the technical requirements of the solicitation, writing or discussing technical or cost proposals, estimating cost or any other actions which are the offerors responsibility as outlined in this solicitation. (See Reference C at the end of this solicitation for a complete listing, with telephone numbers, of Small and Disadvantaged Business Utilization Specialists assigned to these activities.)

7.4 State Assistance Available

Many states have established programs to provide services to those small firms and individuals wishing to participate in the Federal SBIR Program. These services vary from state to state, but may include:

- Information and technical assistance;
- Matching funds to SBIR recipients;
- Assistance in obtaining Phase III funding.

Contact your State Government Office of Economic Development for further information.

8.0 TECHNICAL TOPICS

Section 8 contains detailed topic descriptions outlining the technical areas in which DoD Components request proposals for innovative R&D from small businesses. Topics for each participating DoD Component are listed and numbered separately. Each DoD Component Topic Section contains topic descriptions, addresses of organizations to which proposals are to be submitted, and special instructions for preparing and submitting proposals to organizations within the component. Read and follow these instructions carefully to help avoid administrative rejection of your proposal.

<u>Component Topic Sections</u>	<u>Pages</u>
Army	ARMY 1-138
Navy	NAVY 1-53
DARPA	DARPA 1-33
SOCOM	SOCOM 1-7
OSD	OSD 1-17

Appendices A, B, C, D and E follow the Component Topic Sections. Appendix A is a Proposal Cover Sheet, Appendix B is a Project Summary form, Appendix C is an outline for the Cost Proposal, Appendix D is the Fast Track Application Form, and Appendix E is the Company Commercialization Report. A completed copy of Appendix A, Appendix B, and Appendix E, as well as a completed Cost Proposal, must be included with each proposal submitted.

Many of the topics in Section 8 contain references to technical literature or military standards, which may be accessed as follows:

- References with "AD" numbers are available from DTIC, by calling 800/DoD-SBIR or sending an e-mail message to sbir@dtic.dla.mil
- References with "MIL-STD" numbers are available from the DoD Index of Specifications and Standards (DODISS) at Internet address <http://www.dtic.mil/dps-phila/dodiss>
- Other references can be found in your local library or at locations mentioned in the reference.